

LIST OF CURRENT CLAIMS

1. (Previously Presented) Device for simultaneously cooling and removing liquid from compressed gas of at least one compressor element, comprising a pressure vessel provided with a liquid drain at a bottom thereof, an inlet for compressed gas at a distance above the latter and an outlet for compressed gas at a top thereof, wherein a distribution device is provided in the pressure vessel between the inlet and the outlet for the compressed gas, said distribution device arranged so as to spread a cool fluid in direct contact with the compressed gas, and including a heat exchanger in the pressure vessel arranged to heat compressed gas which has been cooled by the cool fluid.
2. (Previously Presented) Device according to claim 1, wherein the cool fluid is spread in counterflow relationship with respect to the flow of compressed gas.
3. (Previously Presented) Device according to claim 1, wherein a contactor is provided between the inlet and the distribution device.
4. (Previously Presented) Device according to claim 3, wherein the contactor comprises a pile of loose particles.
5. (Previously Presented) Device according to claim 3, wherein the contactor comprises a mass with an open structure.
6. (Previously Presented) Device according to claim 3, wherein the contactor comprises dishes.
7. (Currently Amended) Device according to claim ~~[[1]]~~ 3, wherein the contactor comprises a combination of different types of contactors.
8. (Previously Presented) Device according to claim 1, wherein the heat exchanger arranged to heat the gas is located at a top area of pressure vessel.

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9. (Previously Presented) Device according to claim 1, wherein the distribution device for cool fluid comprises a pipe opening onto the contactor in the pressure vessel and extending over a cooler.

10. (Previously Presented) Device according to claim 9, wherein the cooler is a heat exchanger whose primary part is part of a cooling circuit and whose secondary part is a part of the pipe.

11. (Previously Presented) Device according to claim 9, wherein the pipe of the distribution device connects to a return line of a water drain of the pressure vessel to an injection system of the compressor element.

12. (Previously Presented) Device according to claim 11, including a cooler located in the return line.

13. (Previously Presented) Device according to claim 9, wherein a part of the pipe of the distribution device is part of the heat exchanger to enable re-heating the gas.

14. (Previously Presented) Device according to claim 3, including a demisting device in the pressure vessel above the contactor.

15. (Previously Presented) Device according to claim 3, wherein the heat exchanger and the contactor are thermally insulated and in that the insulation is provided on the outside of the pressure vessel.